Missouri Childhood Lead Poisoning Prevention

Missouri Department of Health and Senior Services

Annual Report Fiscal Year 2008

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This report meets the statutory mandate for an annual report per 701.343, RSMO

About Our Program

PROGRAM MISSION:
Assure the children of Missouri a safe and healthy environment through the detection, treatment, and primary prevention of lead exposures that may cause illness or death.

The Missouri Department of Health and Senior Services' (DHSS) Childhood Lead Poisoning Prevention Program (CLPPP) works to assure that doctors and nurses have the right information and tools available to screen patients under the age of six for lead. State guidelines describe proper treatment of children with elevated blood lead levels (EBL) of at least ten micrograms per deciliter (10 µg/dL), which is the level of concern recommended by the Centers for Disease Control and Prevention (CDC). The program was established in 1993.

Follow-up activities and case management are generally provided for children with an EBL $\geq$ 10 µg/dL. These follow-up activities assist in helping the family understand the causes and health effects of childhood lead poisoning along with interventions that can reduce the current elevation, and help prevent repeated elevations. Risk assessments, using DHSS funding, are provided for children with an EBL $\geq$ 15 µg/dL. Children must have two levels of 15 µg/dL or greater at least three months apart for MOHealthNet to pay for this service. These assessments provide the family with information about where lead hazards exist in and around their home, and how best to reduce these hazards and the risks associated with them.

Lead poisoning prevention educational materials are developed and distributed to create an awareness of lead poisoning. DHSS works with the local public health agencies (LPHAs), the medical community, other state agencies, businesses, schools, and community organizations in efforts to prevent childhood lead poisoning. The Missouri CLPPP created Leadosaurus, a dinosaur character, to promote lead poisoning prevention. The Leadosaurus costume may be borrowed from DHSS by any organization in Missouri wanting to increase lead poisoning prevention education and blood lead testing.

The program currently uses the MOHSAIC (MISSOURI HEALTH STRATEGIC ARCHITECTURES & INFORMATION COOPERATIVE) database to collect lead-specific data from medical and lead program activities pertaining to children under the age of six years. This database is part of a tracking system to provide medical testing, case management and environmental assessments statewide. The data are used to provide comprehensive lead case management services and for statistical information.

The goal of CLPPPs in the United States is to eliminate elevated blood lead levels in children in the U.S. by 2010.

Lead Poisoning in Missouri

Lead is a shiny, silver-colored metal found naturally in the earth's crust. Lead has historically been used in a variety of ways including in paints, gasoline, batteries, bullets, and some vinyl products, such as mini-blinds. Fine particles of processed or recycled lead and/or lead dust become a health hazard when they are taken into the body through inhalation (breathing) and/or ingestion (swallowing).

Lead affects almost every organ and system in the body. The effects are the same whether it is breathed in or swallowed. Lead damages the brain, central nervous system, kidneys, and immune system. Lead in the human body is most harmful to young children under six years of age. It is especially detrimental to children less than three years of age due to their rapidly developing systems.

A blood test is used to determine lead levels. Lead can be measured in blood drawn from a vein or capillary (fingerstick). Blood lead levels are measured and reported as micrograms of lead per deciliter of whole blood (µg/dL).

Lead poisoning is one of the most common and preventable environmental health problems today. Almost half a million children in the United States are estimated to have elevated blood lead levels of at least 10 µg/dL. According to 2008 Missouri blood lead testing data, 1,175 children under the age of six were identified with elevated blood lead levels.

The primary lead hazard to children in Missouri is deteriorated lead-based paint. Lead-based paint was banned for residential use nationwide in 1978. Any home built before 1978 may contain leaded paint. The highest risk of lead exposure for children is found in homes built before 1950, when most paint contained a high percentage of lead. More than twenty-three percent (23.6%) of the housing stock in Missouri was built before 1950. Sixty counties in Missouri have greater than twenty-three percent (23.6%) pre-1950 housing stock.

Lead mining and smelting are an important part of Missouri's history. Lead in Missouri was first discovered along the Meramec River by French explorers in the 1700s while searching for gold and silver. Missouri became the dominant lead-producing state in the nation in 1907. It has remained number one ever since. Most early lead production came from the Old Lead Belt district of southeast Missouri in the Park Hills-Bonne Terre area, and in the Tri-State Zinc-Lead district in southwest Missouri around Joplin. Today, all of the state's lead production comes from the New Lead Belt, also known as the Viburnum Trend district. This district is a very narrow, 35-mile-long ore district extending southward from the small town of Viburnum, Iron County, in southeast Missouri. Mining waste products in these areas often end up on driveways, in yards, or even in children's play areas. Dust, air and soil around mining activity have consistently shown elevated levels of lead contamination.

Statewide Screening Plan

Missouri Senate Bill 266, passed in 2001, required DHSS to promulgate rules and regulations to establish a statewide screening plan. The rules and regulations define criteria for establishing geographic areas in the state considered to be at higher risk for lead poisoning; outline blood lead testing requirements and protocols; and define lead testing follow-up and treatment procedures.

In developing these regulations, CLPPP applied Missouri surveillance and census data to establish criteria for Universal Testing (high-risk) areas in Missouri. Based upon those criteria, and as required by state statute, the following activities will occur in Universal Testing Areas:

- Any child under the age of six living in or visiting for more than 10 hours per week in the high-risk area will be tested annually for lead.
- Childcare facilities must record a "proof of lead testing" signed by the health care provider within 30 days of the child's enrollment. If the parent/guardian does not provide proof or a written statement explaining why they do not want the child tested, the childcare facility is to offer the parent assistance in scheduling a test.

Areas of the state not requiring Universal Testing will require testing of children under certain circumstances. In Targeted Testing Areas the following activities shall occur:

- From six months to six years of age, every child will be screened annually, by verbal risk assessment, to determine whether they are at high risk.
- Every child less than age six, found to be at high risk, will be tested for lead.
- All MO HealthNet eligible children shall be assessed by the Healthy Child and Youth (HCY) Lead Risk Assessment Guide questionnaire and/or be blood lead tested at the ages stipulated by the Federal Program Guidelines (12 months of age, 24 months of age, or 12 to 72 months of age).

During 2008, Nodaway, Grundy and McDonald counties, along with Kansas City zip code 64132, were able to go from Universal to Targeted screening because the number of children tested increased and the percentage of children identified as having an elevated blood lead level decreased. An updated Universal Testing map is published every year and is available at www.dhss.mo.gov/ChildhoodLead/Maps.html

Reporting of Blood Lead Testing

Missouri's disease reporting rule was updated in October 2000. This rule: 1) requires reporting of all blood lead tests both elevated and non-elevated; and 2) clarifies demographic patient information required with the report. This rule requires all healthcare providers and laboratories to report. All blood lead test results are required to be reported to the DHSS regardless of the age of the individual or the reported lead level. This is in accordance with the Reporting Rule 19 CSR 20-20.020. The data contributes to Missouri's local, regional and statewide statistics on blood lead poisoning. Complete text of the rule may be found on the Missouri Secretary of State's website: **www.sos.mo.gov/adrules/csr/current/19csr/19c20-20.pdf**

The following information is required:

- Designate the test performed
- Results of the test
- Name and address of the attending physician
- Name of the disease or condition diagnosed or suspected
- Date the test results were obtained
- Patient's complete name and home address with zip code
- Patient's age and date of birth
- Patient's sex and race

Healthcare providers should assure that the laboratory they are using is reporting to DHSS.

LeadCare Analyzers

LeadCare Analyzers are portable, safe and easy-to-use instruments that give results of capillary blood lead samples within minutes. These devices allow the patient to receive a result immediately from the tester. LeadCare Analyzers are very convenient for physician's offices and health departments. These devices:

- Prevent the patient from possibly being referred to an entirely different location to have the test done.
- Save time that would be spent waiting on lab results.

The use of these instruments has increased among providers and local public health agencies.

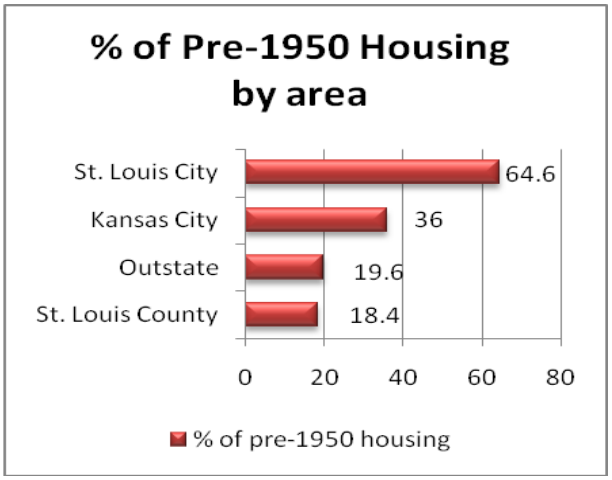
Housing Risks

Nationally, the average percentage of housing built pre-1950 decreased from 27% in 1990 to 22% in 2000. Missouri is above the national average with 23.6% of housing units being built before 1950. The table below lists the percentage of pre-1950 housing by county according to 2000 census data.

Percent of Missouri Pre-1950 Housing by County*

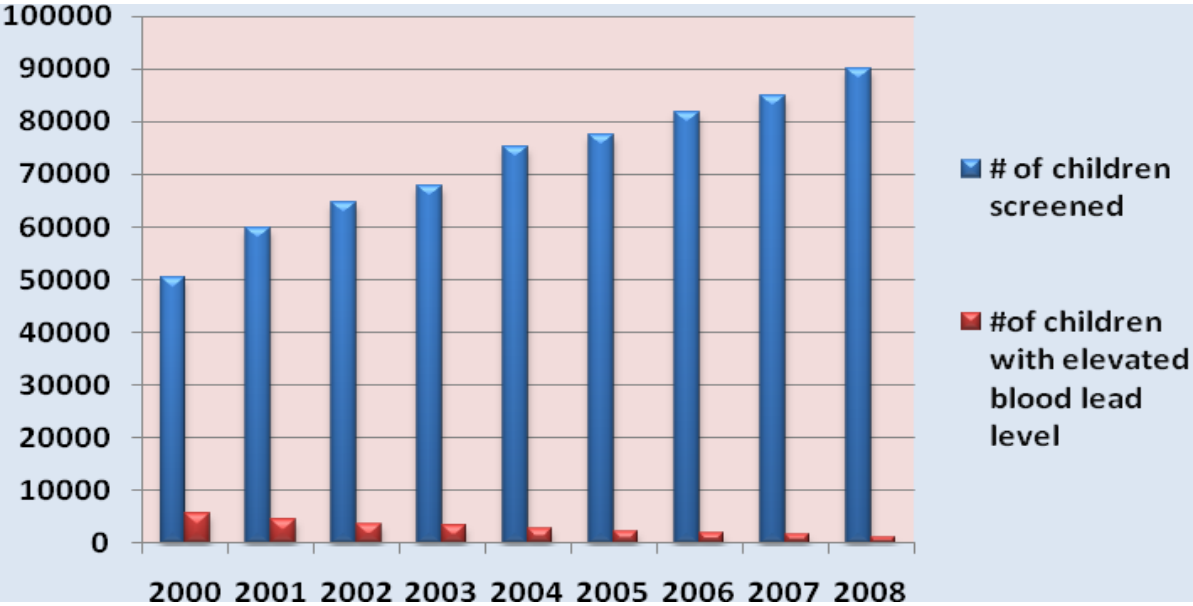
County	Pre-1950 Housing %	County	Pre-1950 Housing %	County	Pre-1950 Housing %	County	Pre-1950 Housing %
Adair	25.3	Dallas	19.6	Livingston	35.0	Reynolds	16.4
Andrew	28.6	Daviess	34.7	Macon	37.3	Ripley	15.5
Atchison	51.7	DeKalb	30.9	Madison	23.9	Saline	34.7
Audrain	30.8	Dent	22.1	Maries	24.8	Schuyler	45.5
Barry	21.4	Douglas	22.9	Marion	40.9	Scotland	48.3
Barton	36.6	Dunklin	21.8	McDonald	22.4	Scott	21.6
Bates	33.8	Franklin	18.7	Mercer	37.2	Shannon	20.3
Benton	13.2	Gasconade	30.7	Miller	16.3	Shelby	43.9
Bollinger	20.5	Gentry	46.5	Mississippi	26.8	St. Charles	4.7
Boone	10.5	Greene	18.0	Moniteau	29.6	St. Clair	28.8
Buchanan	43.1	Grundy	42.0	Monroe	31.8	St. Francois	22.2
Butler	17.1	Harrison	46.0	Montgomery	30.2	St. Louis City	64.6
Caldwell	35.1	Henry	27.8	Morgan	11.6	St. Louis County	18.4
Callaway	15.2	Hickory	12.4	New Madrid	19.1	Ste. Genevieve	19.1
Camden	4.1	Holt	46.6	Newton	21.9	Stoddard	19.0
Cape Girardeau	20.0	Howard	39.3	Nodaway	36.1	Stone	8.6
Carroll	43.3	Howell	18.7	Oregon	26.5	Sullivan	45.4
Carter	14.2	Iron	20.5	Osage	27.4	Taney	6.5
Cass	11.6	Jackson	27.8	Ozark	16.3	Texas	20.5
Cedar	22.1	Jasper	30.8	Pemiscot	22.2	Vernon	31.7
Chariton	38.7	Jefferson	10.3	Perry	26.4	Warren	11.6
Christian	8.9	Johnson	15.8	Pettis	30.9	Washington	13.8
Clark	34.4	Knox	45.6	Phelps	16.8	Wayne	16.2
Clay	11.9	Laclede	16.9	Pike	30.1	Webster	19.5
Clinton	28.7	Lafayette	30.5	Platte	8.4	Worth	56.9
Cole	18.8	Lawrence	29.5	Polk	21.5	Wright	26.9
Cooper	36.5	Lewis	35.7	Ralls	23.5	**STATEWIDE MISSOURI**	**23.6**
Crawford	19.6	Lincoln	14.8	Randolph	33.2		
Dade	37.6	Linn	43.4	Ray	25.5	***2000 Census data**	

The bar chart to the right compares the percentage of pre-1950 housing stock in the largest metropolitan areas in Missouri. St. Louis City's housing comprises 64.6% of pre-1950 housing. St. Louis County contains 18.4% and Kansas City contains 36%. All other areas of Missouri (outstate) average 19.6% pre-1950 housing.



Testing and Prevalence

Due to CLPPP activities, the number of Missouri's children less than six years old who have been tested for lead exposure has increased from 50,362 in 2000 to 90,149 in 2008. Of the number of children tested, the percentage found to have elevated blood lead levels has declined from 11.1% in 2000 to 1.3% in 2008. This decrease mirrors a nationwide decrease in children's blood lead levels. In 2008, of the 90,149 children in Missouri who received a blood lead test, 1,175 (1.3%) had a blood lead level of 10 µg/dL or greater. Refer to the chart below.



A few highlights from 2008 testing data…

- Over 90,000 children were tested for lead during 2008, a 79% increase in testing since 2000.
- The number of children found to have an EBL decreased from 5,588 in 2000 to 1,175 in 2008.
- In 2008, 34.8% of children less than six years of age living in Universal Testing areas received a blood lead test, with 2.5% in these areas being identified with an elevated blood lead level.
- Missouri's overall prevalence rate is 1.3%.

A summary of county level blood lead testing data is presented on pages 7-8.

Missouri Department of Health and Senior Services
Fiscal Year 2008 Blood Lead Testing Data
July 1, 2007 through June 30, 2008
Children Less Than Six Years of Age

	Blood Lead Levels in μg/dl								2000 Census Population	% of Pop tested	# of Children ≥10 μg/dl	% Elevated ≥10 μg/dl
COUNTY	<10	10-14	15-19	20-24	25-44	45-69	>69	TOTAL				
Adair	458	0	2	0	0	0	0	460	1592	29%	2	0%
Andrew	166	0	0	0	0	0	0	166	1292	13%	0	0%
Atchison	62	5	0	1	0	0	0	68	367	19%	6	9%
Audrain	378	4	2	1	2	1	0	388	2018	19%	10	3%
Barry	395	4	0	0	0	0	0	399	2745	15%	4	1%
Barton	239	3	1	0	0	0	0	243	1147	21%	4	2%
Bates	428	7	3	0	1	0	0	439	1260	35%	11	3%
Benton	205	0	0	0	0	0	0	205	973	21%	0	0%
Bollinger	245	1	0	0	0	0	0	246	888	28%	1	0%
Boone	2213	5	1	2	0	0	0	2221	10158	22%	8	0%
Buchanan	953	24	10	3	5	1	0	996	6488	15%	43	4%
Butler	574	4	0	1	0	0	0	579	3132	18%	5	1%
Caldwell	164	5	0	1	0	0	0	170	687	25%	6	4%
Callaway	536	2	0	1	0	0	0	539	3088	17%	3	1%
Camden	332	2	0	0	0	0	0	334	2083	16%	2	1%
Cape Girardeau	711	4	0	0	1	0	0	716	4940	14%	5	1%
Carroll	227	3	3	0	0	0	0	233	782	30%	6	3%
Carter	139	2	0	0	0	0	0	141	436	32%	2	1%
Cass	756	2	0	0	0	0	0	758	7347	10%	2	0%
Cedar	186	3	0	0	0	0	0	189	932	20%	3	2%
Chariton	130	1	0	0	0	0	0	131	517	25%	1	1%
Christian	917	2	0	0	0	0	0	919	4987	18%	2	0%
Clark	102	0	0	0	0	0	0	102	548	19%	0	0%
Clay	1880	0	3	0	0	0	0	1883	15744	12%	3	0%
Clinton	278	3	1	2	0	0	0	284	1498	19%	6	2%
Cole	899	1	0	0	0	0	0	900	5529	16%	1	0%
Cooper	271	1	0	0	1	0	0	273	1179	23%	2	1%
Crawford	297	1	2	0	0	0	0	300	1810	17%	3	1%
Dade	101	1	0	0	0	0	0	102	547	19%	1	1%
Dallas	168	1	1	0	1	0	0	171	1274	13%	3	2%
Daviess	156	1	0	0	0	0	0	157	665	24%	1	1%
Dekalb	128	0	0	1	0	0	0	129	714	18%	1	1%
Dent	296	2	2	1	1	0	0	302	1154	26%	6	2%
Douglas	202	0	0	0	0	0	0	202	945	21%	0	0%
Dunklin	380	1	0	0	0	0	0	381	2807	14%	1	0%
Franklin	898	4	1	0	2	0	0	905	7814	12%	7	1%
Gasconade	222	1	0	0	0	0	0	223	1067	21%	1	0%
Gentry	134	3	0	1	0	0	0	138	524	26%	4	3%
Greene	3166	13	4	4	3	0	0	3190	17657	18%	24	1%
Grundy	277	1	1	0	0	0	0	279	779	36%	2	1%
Harrison	194	1	0	0	0	0	0	195	662	29%	1	1%
Henry	317	5	0	1	0	0	0	323	1554	21%	6	2%
Hickory	127	2	0	0	0	0	0	129	460	28%	2	2%
Holt	119	2	0	0	0	0	0	121	313	39%	2	2%
Howard	226	4	0	0	0	0	0	230	693	33%	4	2%
Howell	310	0	0	0	0	0	0	310	2993	10%	0	0%
Iron	340	10	5	1	2	0	0	358	760	47%	18	5%
Jackson	10674	57	24	12	10	0	0	10777	54836	20%	103	1%
Jasper	2656	21	3	2	4	0	0	2686	9070	30%	30	1%
Jefferson	2086	7	1	0	0	0	0	2094	17184	12%	8	0%
Johnson	412	3	1	0	0	0	0	416	3857	11%	4	1%
Knox	103	1	0	0	0	0	0	104	323	32%	1	1%
Laclede	515	1	1	0	0	0	0	517	2683	19%	2	0%
Lafayette	417	0	0	0	0	0	0	417	2460	17%	0	0%
Lawrence	614	3	0	0	0	0	0	617	3034	20%	3	0%
Lewis	197	2	0	0	0	0	0	199	890	22%	2	1%
Lincoln	544	1	2	0	0	0	0	547	3446	16%	3	1%
Linn	338	3	0	0	0	0	0	341	1028	33%	3	1%
Livingston	274	5	1	0	1	0	0	281	1090	26%	7	2%

Missouri Department of Health and Senior Services
Fiscal Year 2008 Blood Lead Testing Data
July 1, 2007 through June 30, 2008
Children Less Than Six Years of Age

	Blood Lead Levels in μg/dl								2000 Census Population	% of Pop tested	# of Children ≥10 μg/dl	% Elevated ≥10 μg/dl
COUNTY	<10	10-14	15-19	20-24	25-44	45-69	>69	TOTAL				
Macon	361	2	1	0	0	0	0	364	1205	30%	3	1%
Madison	121	0	1	0	0	0	0	122	835	15%	1	1%
Maries	130	1	0	0	0	0	0	131	710	18%	1	1%
Marion	736	18	8	2	5	0	0	769	2278	34%	33	4%
Mcdonald	369	0	0	1	0	0	0	370	2003	18%	1	0%
Mercer	93	2	1	0	0	0	0	96	248	39%	3	3%
Miller	182	1	2	2	0	0	0	187	1925	10%	5	3%
Mississippi	485	0	0	0	1	0	0	486	1153	42%	1	0%
Moniteau	283	2	0	0	0	0	0	285	1206	24%	2	1%
Monroe	212	2	0	0	1	0	0	215	739	29%	3	1%
Montgomery	244	1	0	0	0	0	0	245	858	29%	1	0%
Morgan	135	0	0	0	0	0	0	135	1393	10%	0	0%
New Madrid	378	2	0	1	0	0	0	381	1580	24%	3	1%
Newton	1043	4	1	0	0	0	0	1048	4458	24%	5	0%
Nodaway	382	5	1	0	0	0	0	388	1266	31%	6	2%
Oregon	180	0	0	0	0	0	0	180	732	25%	0	0%
Osage	182	0	0	0	0	0	0	182	1057	17%	0	0%
Ozark	164	1	0	0	1	0	0	166	619	27%	2	1%
Pemiscot	238	1	1	0	0	0	0	240	1981	12%	2	1%
Perry	305	0	0	0	0	0	0	305	1489	20%	0	0%
Pettis	579	9	6	0	1	0	0	595	3298	18%	16	3%
Phelps	626	0	1	0	1	0	0	628	2769	23%	2	0%
Pike	255	4	0	0	0	0	0	259	1190	22%	4	2%
Platte	683	1	0	0	0	0	0	684	6044	11%	1	0%
Polk	476	1	0	0	0	0	0	477	2204	22%	1	0%
Pulaski	319	0	0	0	0	0	0	319	3778	8%	0	0%
Putnam	90	0	1	0	0	0	0	91	382	24%	1	1%
Ralls	208	1	0	0	0	0	0	209	667	31%	1	0%
Randolph	302	1	0	0	0	0	0	303	1899	16%	1	0%
Ray	326	5	0	1	0	0	0	332	1875	18%	6	2%
Reynolds	138	1	3	0	0	0	0	142	474	30%	4	3%
Ripley	214	3	1	0	0	0	0	218	980	22%	4	2%
Saline	516	3	1	0	0	0	0	520	1737	30%	4	1%
Schuyler	119	1	0	0	0	0	0	120	316	38%	1	1%
Scotland	139	0	1	0	0	0	0	140	421	33%	1	1%
Scott	875	0	0	0	0	0	0	875	3430	26%	0	0%
Shannon	61	0	0	0	0	0	0	61	611	10%	0	0%
Shelby	210	1	0	0	0	0	0	211	480	44%	1	0%
St Charles	2241	3	0	0	0	0	0	2244	26072	9%	3	0%
St Clair	151	1	1	0	0	0	0	153	628	24%	2	1%
St Francois	904	20	4	2	2	0	0	932	4040	23%	28	3%
St Louis City	12845	342	86	44	33	4	0	13354	28369	47%	509	4%
St Louis Co	15587	64	19	9	4	1	0	15684	77612	20%	97	1%
Ste Genevieve	308	1	0	0	0	0	0	309	1314	24%	1	0%
Stoddard	580	2	0	0	0	0	0	582	2048	28%	2	0%
Stone	235	1	0	0	0	0	0	236	1866	13%	1	0%
Sullivan	284	1	0	0	0	0	0	285	618	46%	1	0%
Taney	441	0	0	0	0	0	0	441	2909	15%	0	0%
Texas	205	0	0	0	0	0	0	205	1612	13%	0	0%
Vernon	304	2	0	0	0	0	0	306	1628	19%	2	1%
Warren	388	0	0	0	0	0	0	388	1929	20%	0	0%
Washington	497	10	2	2	0	1	0	512	1844	28%	15	3%
Wayne	133	0	0	0	0	0	0	133	850	16%	0	0%
Webster	420	1	1	0	0	0	0	422	2839	15%	2	0%
Worth	43	0	0	0	0	0	0	43	152	28%	0	0%
Wright	317	0	1	0	0	0	0	318	1496	21%	1	0%
TOTAL	**88974**	**766**	**219**	**99**	**83**	**8**	**0**	**90149**	**445,566**	**20%**	**1175**	**1%**

Case Management Services

Case Management of children with elevated blood lead levels involves coordinating, providing and overseeing the services required to reduce the child's blood lead level to below the level of concern, which is 10 µg/dL. It is based on the efforts of an organized team and should be child and family centered. Case management services may be performed by a local public health agency, a MO HealthNet Managed Care health plan (see "Collaborations" section for more information), a health care provider, or another contracted agency. The CLPPP and MO HealthNet staff monitor case management for children identified with a blood lead level greater than or equal to 10 µg/dL using MOHSAIC. DHSS staff continue to work with lead case managers across the state to document follow up services using MOHSAIC. Work has begun toward the future goal of collecting case management follow up data in a report format.

Environmental Services

The Missouri Public Health System provides lead risk assessments to detect the hazardous sources of lead exposure in children's homes. This service is provided for children under the age of six who have a venous-confirmed blood lead level of 15 µg/dL or greater.

A risk assessment is performed by a professional trained and licensed by the Lead Licensing Program. The assessor speaks with the child's family to determine areas of the home where the child spends the most time. X-ray Fluorescence Analyzers (XRF's) are used to test dust, soil and water samples to determine if and where lead hazards exist. Upon completing the assessment and receiving the lab analysis, the risk assessor provides the property owner and/or occupant (if other than the owner) with recommendations for reducing lead hazards. The risk assessor revisits the home at an agreed-upon time to assure lead reduction has been accomplished.

Activities Funded Through the CLPPP

Staffing

The Childhood Lead Poisoning Prevention Program is staffed by the following positions:

- One Program Manager
- One Community Health Nurse
- Two Health Educators
- One Surveillance Coordinator
- One Health Program Representative
- Two Data Entry Personnel
- Three Environmental Specialists

Contracts

St. Louis City, St. Louis County, and Kansas City are Missouri's three largest metropolitan areas. According to 2000 census data and 2007 surveillance data, these three areas combined are home to 60% of Missouri's children with elevated blood lead levels. To decrease the prevalence of EBL's in these areas, DHSS contracts with the LPHA to provide educational activities, lead testing and case management and environmental assistance. The contracts also allow the state lead program to monitor progress on these activities. CLPPP is collaborating with DHSS's Section for Healthy Families and Youth to utilize other funding sources and to assure these services are available to children in other areas of Missouri.

Environmental contracts were established for other regions of the state to assure that children with an EBL receive accurate and timely risk assessments. These contracts provide EBL risk assessments for 48 of the 114 counties. The CLPPP staff provides assessments in the other counties. The contracts resulted in more complete and timely compliance with reporting of risk assessment data. The data are used to track compliance with remediation recommendations.

CLPPP established a contract with the Meramec Regional Planning Commission (MRPC). This contract allows MRPC to provide lead abatement in homes in eight southeast Missouri counties. Priority will go to homes where children have been identified with an EBL. Abatement work will begin in 2009.

Education and Outreach

Lead Poisoning Prevention Education

Twice each year, CLPPP develops an educational campaign and distributes materials to advocates statewide. The campaign goal is to provide stakeholders with the tools necessary to promote lead poisoning prevention. Themes, fact sheets, posters, and public service announcements are examples of campaign packet materials. The materials are to be used during a specific week or month to intensify the statewide effort.

CLPPP also develops and distributes a newsletter twice each year for local and state partners. The NewsLEADer contains resource information such as new publications available, websites, and tips for successful public outreach. Stakeholders are encouraged to share their lead poisoning prevention activities and ideas. Several educational brochures and fact sheets that focus on specific lead-related issues, such as "Lead Safety at Work" and "Pregnancy and Lead Poisoning", are also available and can be ordered for community-wide use.

Educational materials are also available and displayed at health fairs, home shows, blood lead testing events and other public events when possible. Display boards are decorated with lead posters, signs, facts, materials and the CLPPP mascot, Leadosaurus. The display boards are helpful because they capture people's attention and draw them in to learn about lead poisoning prevention.

Campaign information, newsletters, fact sheets, booklets and other publications are all available to the public on the CLPPP webpage. The webpage also features: upcoming events, lead testing guidelines, Missouri lead testing maps, product recalls, data and statistical reports, laws, regulations and manuals. The website is updated as new campaigns are created and can be accessed at www.dhss.mo.gov/ChildhoodLead/index.html

CLPPP has organized two physician symposiums to educate Missouri physicians about the most recent research on lead toxicity. Doctors attending the symposium should gain an increased understanding of the relevance, benefits and methods of testing children less than six years of age for lead poisoning. The symposium also serves to remind physicians of their responsibility to comply with Missouri state regulations regarding childhood lead poisoning prevention.

Collaborations

Collaboration with Agency for Toxic Substance and Disease Registry (ATSDR)/Environmental Protection Agency (EPA)/Missouri Department of Natural Resources (DNR)

Lead mining, milling and smelting have occurred throughout the lower half of Missouri. Missouri ranks as the top lead-producing state in the nation. Across the state, there are at least 32 Missouri counties containing hazardous lead-bearing substances.

Tailings and chat piles are "mining waste" or the waste from the processing of lead ore. In St. Francois County, six large mine tailings and chat piles from past mining and milling operations are located near residential areas. Over time, mine waste has migrated off the waste piles and ponds into the surrounding community. The migration has been caused by wind or water erosion, or from human activities such as using the lead waste as fill material in yards or driveways. Madison County also has lead mine tailings piles from which people have used chat for traction along roads in winter and as fill in sandboxes. Similar situations have occurred in Jasper and Newton counties. Newton County, Madison County, the Annapolis Lead Mines, Potosi, Old Mines and Richwoods have all been placed on the EPA's National Priorities List. In addition, there is an active lead smelter in Herculaneum, Missouri. The smelter processes lead concentrate from current mining and milling operations into lead ingots for further use in consumer products like batteries and computers.

DHSS, along with other state, local and federal agencies (including ATSDR, EPA, and DNR) are addressing these sites to protect public health. Multiple actions have been taken to reduce human exposure and prevent lead poisoning, especially to children less than six years old. Some of the actions taken by partnering agencies at the various sites include monitoring of air, sampling of soil, water and dust, stabilization of the tailings piles, yard soil removals, street cleanings, interior home cleaning, reduction in smelter air emissions, and special blood lead testing events. Additional activities conducted by DHSS include health studies, health consultations, public health assessments, and ongoing educational activities.

Collaboration with DHSS Lead Licensing Program

The Lead Licensing Program is responsible for licensing workers who conduct lead abatement, inspections and risk assessments. Program employees may make surprise site visits to verify that all workers have the proper current license and to assure that lead abatement is being performed correctly and safely. This is to ensure the safety of the residents who may not know the harmful effects of improper lead work practices. Like CLPPP, the Lead Licensing Program plays an important role in keeping people healthy and safe from lead poisoning. All CLPPP risk assessors are licensed by the Lead Licensing Program.

Collaborations (continued)

Collaboration with the MO HealthNet Division

Poverty is a risk factor for lead poisoning because families with low incomes are more likely to live in older, substandard housing. The purpose of the MO HealthNet Division is to purchase and monitor health care services for low income and vulnerable citizens of the State of Missouri. In Missouri, during state fiscal year 2008, there were approximately 210,000 children less than six years of age (53% of total) who were eligible for MO HealthNet. According to 2008 fiscal data, 85% of the children with confirmed blood lead levels of 10 μg/dL or greater were enrolled in MO HealthNet.

DHSS, the Missouri Department of Social Services (MDSS) and MO HealthNet Division (MHD) have had a cooperative agreement in place since 1998. This agreement outlines the agencies' mutual objectives regarding childhood lead poisoning to: 1) assure that MO HealthNet eligible children are screened/tested according to the Statewide Lead Testing Plan; and 2) assure that medically necessary services are provided for MO HealthNet-eligible children, whether by a MO HealthNet-enrolled provider or MO HealthNet Managed Care health plan for the correction or amelioration of lead poisoning-related conditions identified through a full or partial Early Periodic Screening Diagnostic Test.

CLPPP determines the MO HealthNet status of all Missouri children with confirmed blood lead levels 10 μg/dL or greater via inquiry into the MO HealthNet database. An EBL child's MO HealthNet status is coded into MOHSAIC to generate case-related reports. These reports are sent to all agencies involved. Case management activities can then be entered into MOHSAIC to facilitate coordination and communication among the MO Health Net Managed Care health plans, MHD, DHSS and the local public health agencies regarding follow-up of EBL children.

Collaborations (continued)

Collaboration with DHSS's Women, Infants, and Children (WIC) Program

Lead exposure and high blood lead levels disproportionately affect minority and poor children. The Special Supplemental Nutrition Program for WIC is an important partner in efforts to combat the health risks of lead poisoning. By identifying high-risk children through a screening process during WIC clinic visits, referring children to their primary care provider for testing, or making blood lead testing available on-site, the likelihood that every child will be tested is improved. This practice also helps assure timely and appropriate follow-up care when a child is found to have an elevated blood lead level.

Collaboration with the Missouri Department of Economic Development

The Missouri Department of Economic Development (DED) currently works with cities and counties to assure that Community Development Block Grant (CDBG) funding is made available for properties where children have been identified with an EBL. DHSS works with DED to locate funding for remediation. The DED has hosted lead-safe work practice trainings. The goal of the training is to explain safe rehabilitation practices to contractors and homeowners, which decreases the probability of additional children being exposed to lead hazards.

Collaboration with the Missouri Local Public Health Agencies (LPHA's)

Many local public health agencies offer blood lead testing within their own counties. Some agencies offer free blood lead testing or referrals to providers that offer testing. Most of these agencies have nurses that provide case management for children who have elevated blood lead levels (EBL's). Ten LPHA's have their own licensed risk assessors who provide risk assessments for children with EBL's within their area. The CLPPP staff occasionally collaborates with LPHAs on EBL cases to provide adequate case and lead hazard management. Education and outreach is often conducted at the local level at health fairs, physicians' offices, childcare facilities, during lead poison prevention campaigns and upon request. The CLPPP program provides these agencies with educational materials and technical assistance for any other issues, such as the use of the MOHSAIC application or training on program and regulatory requirements. LPHA's support and efforts play a key role in steadily moving toward the goal to eliminate childhood lead poisoning.

For more information on lead poisoning prevention contact:

Childhood Lead Poisoning Prevention Program
Missouri Department of Health and Senior Services
930 Wildwood Dr.
Jefferson City, MO 65109
Phone: (573) 751-6102 or (866) 628-9891

Or visit our website at:
www.dhss.mo.gov/ChildhoodLead